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15 IN THE UNITED STATES DISTRICT COURT  
16 FOR THE DISTRICT OF ARIZONA

17 Manuel Bandres Oto and Elisa Lopez-  
18 Belio, individually, and on behalf of all  
19 eligible beneficiaries of claims arising  
20 from the wrongful death of Marina  
21 Bandres Lopez-Belio, et al.

Case No. 2:16-cv-01027-DJH

22 Plaintiffs,

23 v.

24 Airline Training Center Arizona, Inc.,

25 Defendant.

26 **INDEX OF EXHIBITS TO DECLARATION OF  
27 MATTHIAS KIPPENBERG IN SUPPORT OF  
28 DEFENDANT AIRLINE TRAINING CENTER  
ARIZONA, INC.'S MOTION TO DISMISS  
COMPLAINT**

29 Exhibit A	A true and correct copy of the relevant portions of the Final 30 Report of the Bureau d'Enquetes et d'Analyses of the French 31 Government
32 Exhibit B	True and correct copies of the FAA's Freedom of Information 33 Act responses

1 Respectfully submitted,

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## **CERTIFICATE OF SERVICE**

I hereby certify that on June 17, 2016, I electronically transmitted the attached document to the Clerk's Office using the CM/ECF System for filing and transmittal of a Notice of Electronic Filing to the following CM/ECF registrants:

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# Exhibit A

Published March 2016

# Final Report

Accident on 24 March 2015  
at Prads-Haute-Bléone (Alpes-de-Haute-Provence, France)  
to the Airbus A320-211  
registered D-AIPX  
operated by Germanwings



Ministère de l'Ecologie, du Développement durable et de l'Energie

Bureau d'Enquêtes et d'Analyses  
pour la sécurité de l'aviation civile

## ***Safety Investigations***

*The BEA is the French Civil Aviation Safety Investigation Authority. Its investigations are conducted with the sole objective of improving aviation safety and are not intended to apportion blame or liability.*

*BEA investigations are independent, separate and conducted without prejudice to any judicial or administrative action that may be taken to determine blame or liability.*

### **SPECIAL FOREWORD TO ENGLISH EDITION**

*This is a courtesy translation by the BEA of the Final Report on the Safety Investigation. As accurate as the translation may be, the original text in French is the work of reference.*

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## Glossary

ACP	<i>Audio Control Panel</i>
ACARS	<i>Aircraft Communication Addressing and Reporting System</i>
AeMC	<i>Aero-Medical Centre</i>
ALPA	<i>Air Line Pilots Association</i>
AME	<i>Aero-Medical Examiner</i>
AsMA	<i>Aerospace Medical Association</i>
ATC	<i>Air Traffic Control</i>
BÄK	<i>Bundesärztekammer (German Medical Association)</i>
BFU	<i>German Federal Bureau of Aircraft Accident Investigation (Bundesstelle für Flugunfalluntersuchung)</i>
BMVI	<i>Federal Ministry of Transport and Digital Infrastructure (Bundesministeriums für Verkehr und digitale Infrastruktur)</i>
CISM	<i>Critical Incident Stress Management</i>
CIAIAC	<i>Spanish safety investigation authority (Comisión de Investigación de Accidentes e Incidentes de Aviación Civil)</i>
CDLS	<i>Cockpit Door Locking System</i>
CVR	<i>Cockpit Voice Recorder</i>
DGAC	<i>French general civil aviation directorate Direction Générale de l'Aviation Civile</i>
EASA	<i>European Aviation Safety Agency</i>
FCU	<i>Flight Control Unit</i>
FDR	<i>Flight Data Recorder</i>
GPWS	<i>Ground Proximity Warning System</i>
IATA	<i>International Air Transport Association</i>
ICAO	<i>International Civil Aviation Organisation</i>
JAA	<i>Joint Aviation Authorities</i>
LBA	<i>German civil aviation authority (Luftfahrt-BundesAmt)</i>
LFT	<i>Lufthansa Training</i>
MEL	<i>Minimum Equipment List</i>
PF	<i>Pilot Flying</i>

PFD	<i>Primary Flight Display</i>
PM	<i>Pilot Monitoring</i>
QAR	<i>Quick Access Recorder</i>
REV	<i>Medical certificate issued after review procedure</i>
SSRI	<i>Selective Serotonin Re-uptake Inhibitors</i>
WG	<i>Working Group</i>
WHO	<i>World Health Organization</i>

## Synopsis

### Deliberate flight into terrain

<b>Aircraft</b>	Airbus A320-211 registered D-AIPX
<b>Date and time</b>	24 March 2015 at 09 h 41 <sup>(1)</sup>
<b>Operator</b>	Germanwings
<b>Place</b>	Prads-Haute-Bléone (04)
<b>Type of flight</b>	Commercial Air Transport Revenue operations, Passenger
<b>Persons on board</b>	Captain (PM), co-pilot (PF), 4 cabin crew, 144 passengers
<b>Consequences and damage</b>	Crew and passengers fatally injured, aeroplane destroyed

<sup>(1)</sup>Except where otherwise indicated, all times in this report are UTC. One hour should be added to obtain the legal time in metropolitan France on the day of the event.

The co-pilot had been flying for Germanwings since June 2014 and was the holder a class 1 medical certificate that was first issued in April 2008 and had been revalidated or renewed every year. Since July 2009, this medical certificate had contained a waiver because of a severe depressive episode without psychotic symptoms that had lasted from August 2008 until July 2009. This waiver stated that it would become invalid if there was a relapse into depression.

In December 2014, approximately five months after the last revalidation of his class 1 medical certificate, the co-pilot started to show symptoms that could be consistent with a psychotic depressive episode. He consulted several doctors, including a psychiatrist on at least two occasions, who prescribed anti-depressant medication. The co-pilot did not contact any Aero-Medical Examiners (AME) between the beginning of his decrease in medical fitness in December 2014 and the day of the accident.

In February 2015, a private physician diagnosed a psychosomatic disorder and an anxiety disorder and referred the co-pilot to a psychotherapist and psychiatrist. On 10 March 2015, the same physician diagnosed a possible psychosis and recommended psychiatric hospital treatment. A psychiatrist prescribed anti-depressant and sleeping aid medication in February and March 2015. Neither of those health care providers informed any aviation authority, nor any other authority about the co-pilot's mental state. Several sick leave certificates were issued by these physicians, but not all of them were forwarded to Germanwings.

No action could have been taken by the authorities and/or his employer to prevent him from flying on the day of the accident, because they were informed by neither the co-pilot himself, nor by anybody else, such as a physician, a colleague, or family member.

In the cruise phase of the accident flight, the co-pilot waited until he was alone in the cockpit. He then intentionally modified the autopilot settings to order the aeroplane to descend. He kept the cockpit door locked during the descent, despite requests for access made via the keypad and the cabin interphone. He did not respond to the calls from the civil or military air traffic controllers, nor to knocks on the door. Security requirements that led to cockpit doors designed to resist forcible intrusion by unauthorized persons made it impossible to enter the flight compartment before the aircraft impacted the terrain in the French Alps.

The BEA investigation concluded that the process for medical certification of pilots, in particular self-reporting in case of decrease in medical fitness between two periodic medical evaluations, did not succeed in preventing the co-pilot, who was experiencing mental disorder with psychotic symptoms, from exercising the privilege of his licence. The following factors may have contributed to the failure of this principle:

- the co-pilot's probable fear of losing his right to fly as a professional pilot if he had reported his decrease in medical fitness to an AME;
- the potential financial consequences generated by the lack of specific insurance covering the risks of loss of income in case of unfitness to fly;
- the lack of clear guidelines in German regulations on when a threat to public safety outweighs the requirements of medical confidentiality.

The BEA has addressed eleven safety recommendations to the WHO, IATA, the European Commission, EASA, BMVI and BÄK relating to:

- medical evaluation of pilots with mental health issues;
- routine analysis of in-flight incapacitation;
- mitigation of the consequences of loss of licence;
- anti-depressant medication and flying status;
- balance between medical confidentiality and public safety;
- promotion of pilot support programmes.

At 9 h 30 min 53 (point❸), the selected altitude on the FCU changed in one second from 38,000 ft to 100 ft<sup>(2)</sup>. One second later, the autopilot changed to OPEN DES<sup>(3)</sup> mode and autothrust changed to THR IDLE mode. The aeroplane started to descend and both engines' speed decreased.

At 9 h 31 min 37, noises of a pilot's seat movements were recorded.

At 9 h 33 min 12 (point❹), the speed management changed from managed mode to selected<sup>(4)</sup> mode. One second later, the selected target speed became 308 kt while the aeroplane's speed was 273 kt. The aeroplane's speed started to increase along with the aeroplane's descent rate, which subsequently varied between 1,700 ft/min and 5,000 ft/min, then was on average about 3,500 ft/min.

At 9 h 33 min 35, the selected speed decreased to 288 kt. Then, over the following 13 seconds, the value of this target speed changed six times until it reached 302 kt.

At 9 h 33 min 47 (point❺), the controller asked the flight crew what cruise level they were cleared for. The aeroplane was then at an altitude of 30,000 ft in descent. There was no answer from the co-pilot. Over the following 30 seconds, the controller tried to contact the flight crew again on two occasions, without any answer.

At 9 h 34 min 23, the selected speed increased up to 323 kt. The aeroplane's speed was then 301 kt and started to increase towards the new target.

At 9 h 34 min 31 (point❻), the buzzer to request access to the cockpit was recorded for one second.

At 9 h 34 min 38, the controller again tried to contact the flight crew, without any answer.

At 9 h 34 min 47 then at 9 h 35 min 01, the Marseille control centre tried to contact the flight crew on 133.330 MHz, without any answer. The aeroplane was then at an altitude of 25,100 ft, in descent.

At 9 h 35 min 03 (point❼), the selected speed increased again to 350 kt<sup>(5)</sup>.

Subsequently, and until the end of the recording:

- the selected speed remained at 350 kt and the aeroplane's speed stabilised around 345 kt;
- the autopilot and autothrust remained engaged;
- the cockpit call signal from the cabin, known as the cabin call, from the cabin interphone, was recorded on four occasions between 9 h 35 min 04 and 9 h 39 min 27 for about three seconds;
- noises similar to a person knocking on the cockpit door were recorded on six occasions between 9 h 35 min 32 (point❼) and 9 h 39 min 02 ;
- muffled voices were heard several times between 9 h 37 min 11 and 9 h 40 min 48, and at 9 h 37 min 13 a muffled voice asked for the door to be opened;
- between 9 h 35 min 07 and 9 h 37 min 54, the Marseille control centre tried to contact the flight crew on three occasions on 121.500 MHz, and on two occasions on 127.180 MHz, without any answer;
- between 9 h 38 min 38 (point❼) and 9 h 39 min 23, an air traffic controller from the French Air Defence system tried to contact the flight crew on three occasions on 121.500 MHz, without any answer;

<sup>(2)</sup>This is the minimum value that it is possible to select on the A320.

<sup>(3)</sup>This mode is described in paragraph 1.6.6.

<sup>(4)</sup>When the speed is said to be "selected", the target speeds are chosen by the flight crew. When the speed is said to be "managed", it is the flight management system (FMS) that automatically determines the target speeds based on the flight plan entered by the crew.

<sup>(5)</sup>This value is the maximum speed that the flight crew can select. It corresponds to VMO (maximum operating speed).

- noises similar to violent blows on the cockpit door were recorded on five occasions between 9 h 39 min 30 (point ⑩) and 9 h 40 min 28;
- low amplitude inputs on the co-pilot's sidestick were recorded between 9 h 39 min 33 and 9 h 40 min 07<sup>(6)</sup>;
- the flight crew of another aeroplane tried to contact the flight crew of GWI18G at 9 h 39 min 54, without any answer.

At 9 h 40 min 41 (point ⑪), the "Terrain, Terrain, Pull Up, Pull Up" aural warning from the GPWS triggered and remained active until the end of the flight.

At 9 h 40 min 56, a Master Caution was recorded, then at 9 h 41 min 00 the Master Warning triggered and remained active until the end of the flight.

At 9 h 41 min 06, the CVR recording stopped at the moment of the collision with the terrain.

<sup>(6)</sup>The maximum amplitude of these movements remained lower than the disengagement threshold of the autopilot, which thus remained engaged. These actions consequently had no effect on the aeroplane's flight path.

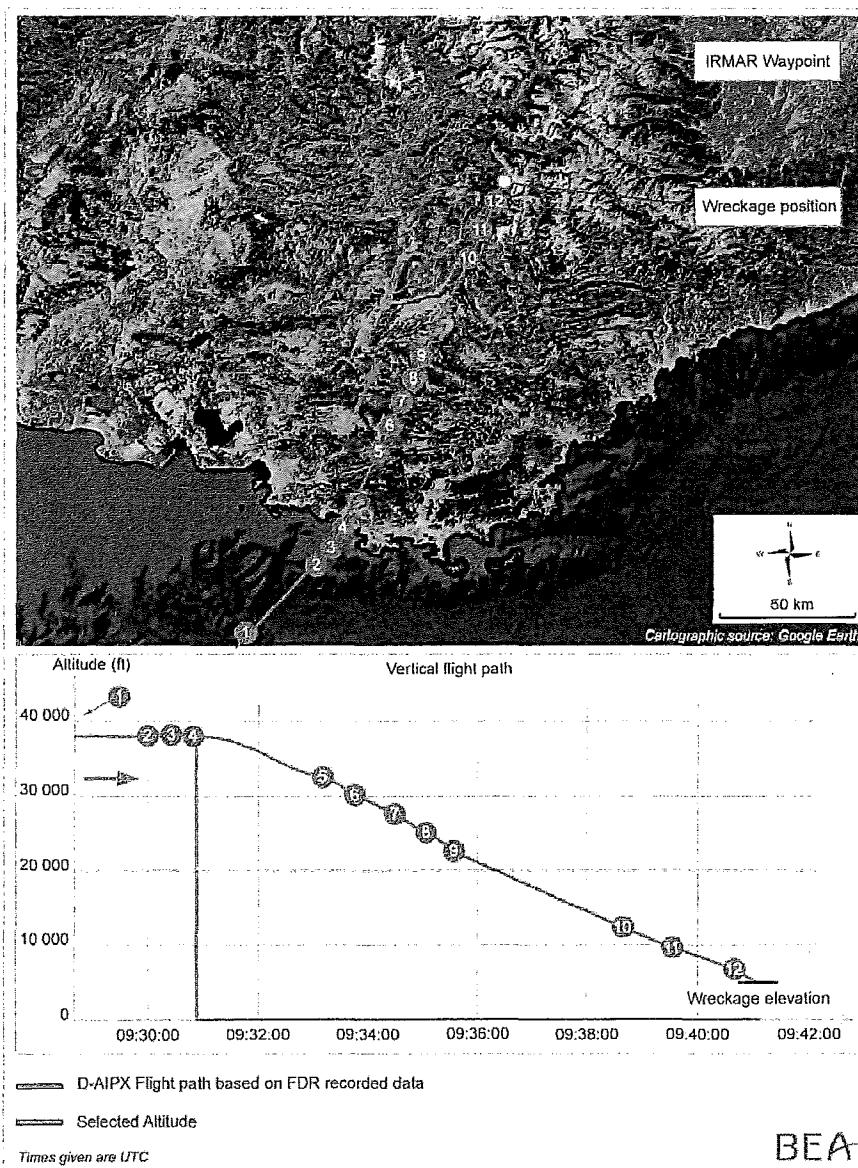


Figure 1 - accident flight trajectory

After joining Germanwings, he followed the operator's conversion training course as a Captain from May to September 2014. During his training and recurrent checks his professional level was judged by his instructors and examiners to be above standard. He passed his line check on 20 September 2014.

The last operator proficiency check (OPC) was performed on 14 January 2015.

His schedule shows that he had not flown between 14 and 22 March 2015. On 23 March 2015, the day before the accident, he flew two rotations from Düsseldorf to London-Heathrow: he took off from Düsseldorf at 6 h 09 for the first rotation and landed at Düsseldorf at 14 h 04 following the second rotation. On the day of the accident, he made the flight from Düsseldorf, taking off at 6 h 01, to Barcelona, landing there at 7 h 57.

### 1.5.2 Co-pilot

Male, aged 27, German nationality.

- Private Pilot Licence PPL(A) issued on 1 March 2011;
- Multi-crew Pilot Licence MPL(A) issued on 11 February 2014;
- A320 type rating revalidated on 28 October 2014.

Experience :

- total : 919 flying hours;
- on type : 540 flying hours;
- in the previous 3 months : 107 hours;
- in the previous month: 30 hours;
- in the previous 24 hours : 3 hours.

Flying career:

- between January and April 2008, he took entry selection courses with Lufthansa Flight Training (LFT);
- on 1 September 2008, he started his basic training at the Lufthansa Flight Training Pilot School in Bremen (Germany);
- on 5 November 2008 he suspended his training for medical reasons;
- on 26 August 2009 he restarted his training;
- on 13 October 2010, he passed his ATPL written exam;
- from 8 November 2010 to 2 March 2011, he continued his training at the Airline Training Centre in Phoenix (Arizona, USA);
- from 15 June 2011 to 31 December 2013, he was under contract as a flight attendant for Lufthansa while continuing his Air Transport pilot training;
- from 27 September to 23 December 2013, he took and passed his A320 type rating at Lufthansa in Munich (Germany);
- on 4 December 2013, he joined Germanwings;
- from 27 January 2014 to 21 June 2014, he undertook his operator's conversion training including his line flying under supervision at Germanwings;
- on 26 June 2014, he passed his proficiency check and was appointed as a co-pilot;
- on 28 October 2014, he passed his operator proficiency check.

During his training and recurrent checks, his professional level was judged to be above standard by his instructors and examiners.

None of the pilots or instructors interviewed during the investigation who flew with him in the months preceding the accident indicated any concern about his attitude or behaviour during flights.

On 9 April 2008, he obtained a class 1 medical certificate without restrictions and valid until 9 April 2009, issued by the Lufthansa aeromedical centre.

On 9 April 2009, his class 1 medical certificate was not revalidated by the Lufthansa aeromedical centre due to depression and the taking of medication to treat it.

On 14 July 2009, his request for renewal of his class 1 medical certificate was refused by the Lufthansa aeromedical centre. The latter informed the LBA of this.

On 28 July 2009, he obtained a new class 1 medical certificate valid until 9 April 2010, endorsed with the note "*Note the special conditions/restrictions of the waiver FRA 091/09 -REV-*".

From July 2009, he obtained each year a class 1 medical certificate valid for one year that was endorsed with the note "*Note the special conditions/restrictions of the waiver FRA 091/09 -REV-*".

The last valid class 1 medical certificate had been issued on 28 July 2014 and was valid until 14 August 2015.

His PPL(A) did not include any note or limitation. His MPL(A) included the limitation "\*\*\*\*SIC\*\*incl. PPL\*\*\*", which means "*Specific regular medical examinations - contact the licence issuing authority*"<sup>(7)</sup>. This limitation requires that the aeromedical examiner (AME) contact the licence issuing authority before proceeding with a medical evaluation relating to any extension or renewal of the medical certificate. This may involve medical history about which the AME must be informed before undertaking the evaluation.

The copilot had had to pay 60,000 € to finance his part of the costs of his training at LFT. He had taken out a loan for about 41,000 € to do so. A Loss-of-License (LOL) insurance contracted by Germanwings existed and would have provided the copilot with a one-time payment of 58,799 € in case he had become permanently unfit to fly in the first five years of employment.

This type of insurance is contracted for all Lufthansa and Germanwings pilots until they reach 35 years of age and complete 10 years of service.

The co-pilot did not have any additional insurance that would cover for potential future loss of income in case of unfitness to fly. In an e-mail he wrote in December 2014, he mentioned that having a waiver attached to his medical certificate was hindering his ability to get such an insurance policy.

His individual duty plan shows that:

- he flew as a co-pilot on Germanwings scheduled services eleven days in December 2014, nine in January 2015, seven in February 2015 and eight in March 2015. He flew on average 2 to 4 flights per day during these days;
- he was on sick leave from 22 to 24 February 2015, then from 16 to 22 March 2015;
- he was on standby on the 10 March 2015 and off duty from 13 to 15 March 2015.

<sup>(7)</sup>According to European regulations, the limitation «SIC» refers to a medical certificate and not to a licence limitation. The LBA used to mention this limitation on pilot licences at that time (see 1.17.4.2).

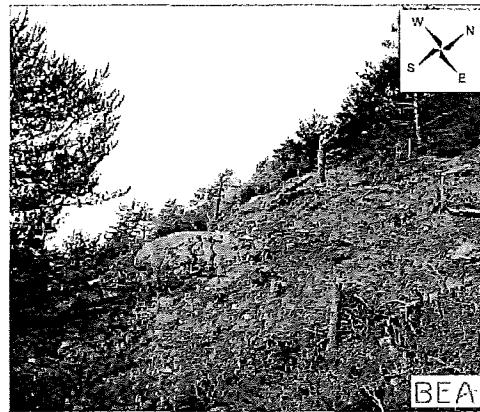


Figure 13 - contact area with vegetation

## 1.13 Medical and pathological information

### 1.13.1 Medical history of the co-pilot

*Note: see paragraph 1.16.2 for definitions of depression and psychosis.*

In August 2008, the co-pilot started to suffer from a severe depressive episode without psychotic symptoms. During this depression, he had suicidal ideation, made several "no suicide pacts" with his treating psychiatrist and was hospitalized. He undertook anti-depressive medication between January and July 2009 and psychotherapeutic treatment from January 2009 until October 2009. His treating psychiatrist stated that the co-pilot had fully recovered in July 2009.

The medical visits that the co-pilot undertook and the relevant medical correspondence since 2008 included the following:

Date (dd/mm/yy)	Type of doctor	Results / prescriptions
09/04/2008	Lufthansa AeMC	Issuance of the first class 1 medical certificate (no restrictions).
04/02/2009	Treating psychiatrist	Report stating that the co-pilot was in regular treatment and that the expected duration of the disease was several months.
09/04/2009	Lufthansa AeMC	Application for the revalidation <sup>(13)</sup> of the class 1 medical certificate, on which the co-pilot declared he had been admitted to hospital. The issuance was postponed until further analysis from a specialist.
10/07/2009	Treating psychiatrist	Report stating that the co-pilot is " <i>entirely healthy</i> " and that " <i>the treatment has ended</i> ". The report was treated by the psychiatrist working for the AeMC on 15/07/2009.
14/07/2009	Lufthansa AeMC	Application for the renewal of the class 1 medical certificate. This renewal was refused by the Lufthansa AeMC and the LBA was informed of this AeMC.

<sup>(13)</sup>Examinations and/or assessments for the revalidation of a medical certificate may be undertaken up to 45 days prior to the expiry date of the medical certificate. Outside that time window, a renewal examination and/or assessment is required (see Part MED, MED.A.045 or JAR-FCL 3.105).

15/07/2009	Psychiatrist working for the Lufthansa AeMC	Report based on treating psychiatrist (written report, 10/07/2009) and treating psychotherapist reports (phone conversations) stating that the severe depressive episode was over and recommending providing class 1 medical certificate.
28/07/2009	Lufthansa AeMC	Issuance of the class 1 medical certificate with a waiver FRA 091/09, stating that it would become invalid if there were a relapse into depression.
11/08/2009	Treating psychotherapist	Letter from the treating psychotherapist to confirm that the pilot could resume his flight training. This letter mentioned a severe depression, but initially had the reference code for recurrent depressive disorder. After this anomaly was detected by the AeMC, the psychotherapist re-issued the same letter with the correct code.
23/02/2010	Treating psychotherapist	Certificate from the treating psychotherapist stating that the co-pilot was under his psychotherapeutic treatment from January to October 2009 and that the co-pilot's high motivation and active participation contributed to the successful completion of the treatment, after the management of symptoms.
24/02/2010	Lufthansa AeMC	Revalidation of class 1 medical certificate with the special conditions/restrictions of the FRA 091/09 waiver.
18/06/2010	Lufthansa AeMC	Renewal of class 1 medical certificate with the special conditions/restrictions of the waiver FRA 091/09.
18/06/2010	AME at the Lufthansa AeMC acting as an AME for the FAA	Application for a FAA third-class medical certificate.
08/07/2010	FAA Aerospace Medical Certification Division	Letter from the FAA to the co-pilot informing him that he was not eligible to hold an airman medical certificate at this time, due to his history of reactive depression. The FAA asked him to submit a report from his prescribing physician that should include diagnosis, prognosis without medication(s), follow-up plan and copies of treatment records.
21/07/2010	Treating psychotherapist and treating psychiatrist	The report from 10/07/2009 from the treating psychiatrist and the certificate from the treating psychotherapist of 23/02/2010 were translated from German to English and submitted to the FAA Aerospace Medical Certification Division for review.
28/07/2010	FAA Aerospace Medical Certification Division	Issuance of a FAA third-class medical certificate without any limitation. The letter from the FAA accompanying the certificate indicates that because of the history of reactive depression, " <i>operation of aircraft is prohibited at any time new symptoms or adverse changes occur or any time medication and/or treatment is required</i> ".

## 2 - ANALYSIS

### 2.1 Scenario

In April 2008, at the age of 20, the co-pilot of the accident flight was selected to start the ab-initio training at Lufthansa, after having passed the required tests, including the ones for mental abilities, logical reasoning, interpersonal skills and personality traits.

On 9 April 2008, he obtained his initial class 1 medical certificate, issued without any limitation, from the Lufthansa AeMC. The psychological and the psychiatric evaluation, required by regulations to be performed during medical examinations, did not indicate any condition that would have made him unfit to fly.

He started his flight training in September 2008 in Bremen (Germany) at the Lufthansa Training centre. Soon after, in November 2008, he interrupted his training because of the onset of a depression and the taking of medication to treat it. He consulted a psychiatrist, who treated him for this depression and expected the illness to last several months.

On 9 April 2009, although he was still suffering from depression, he applied to the Lufthansa AeMC for revalidation of his class 1 medical certificate, exactly one year after it had been issued for the first time. On the application form, he declared having been admitted to hospital. The medical certificate was not issued at that time by this AeMC and the co-pilot was notified that further analysis from a specialist needed to be carried out. In July 2009, a psychiatrist working for the same AeMC reported that the depressive episode was over and that the class 1 medical certificate could again be recommended. A few days later, the same AeMC issued a class 1 medical certificate with a waiver stating that it would become invalid if there was a relapse into depression. A "-REV-" endorsement stated that the medical fitness was determined after a further check. At the time this medical certificate was issued, no referral to the LBA was made by the AMEs of the Lufthansa AeMC, nor was this required by the regulations in force in Germany. It is notable that this class 1 medical certificate was issued shortly after the discontinuation of the anti-depressant medication. If the German regulation at that time had been fully compliant with Part-MED, the decision to issue the certificate would have been referred to the LBA. This independent assessment by the LBA would have been based on the same documents and possibly on advice from other independent psychiatric experts. Though the outcome may have been the same, as the decision of the FAA to issue a class 3 medical certificate in 2010 may suggest, it was nonetheless an opportunity for a different decision to be taken.

Actions on the autopilot system during the first flight of the day may be interpreted as a rehearsal for suicide.

During cruise on the second flight of the day, the co-pilot waited until he was alone in the cockpit. He then intentionally modified the autopilot settings to order the aeroplane to descend until it collided with the ground. He kept the cockpit door locked during the descent, despite requests for access made via the keypad and the cabin interphone. He did not respond to the calls from the civil or military air traffic controllers, nor to knocks on the door, possibly because of cognitive constriction common when a person is committing suicide.

The reinforced structure of the cockpit doors, designed for security reasons to resist penetration, could not be broken from outside to enable somebody to enter before the aircraft impacted the terrain in the French Alps.

## **2.2 Mental health assessment of professional pilots**

Airline transport pilots must hold a valid Class 1 medical certificate to exercise the privileges of their licence. For pilots in the co-pilot's age group, class 1 medical certificates are valid for a period of 12 months. During yearly examinations, pilots undergo physical and mental examinations defined by the regulation and assessments are made by certified AMEs to determine the fit or unfit status of applicants.

Pilots must declare on their class 1 application form whether they have or have ever had any history of psychological or psychiatric trouble of any sort. The psychiatric assessment of pilots during medical certification is then performed through general discussion and by observing behaviour, appearance, speech, mood, thinking, perception, cognition and insight. When in doubt about the psychiatric state of an applicant, an AME can request an expert opinion from a specialist before making a fit or unfit determination.

The depression episode experienced by the co-pilot in 2008 was correctly identified by the Lufthansa AeMC during the revalidation process of his class 1 medical certificate in April 2009. A waiver based on the assessment from a psychiatrist allowed the pilot to hold a class 1 medical certificate again in July 2009. Every year after that, his class 1 medical certificate was revalidated or renewed. All of the AMEs who examined him during that period were aware of the waiver and were informed of his medical history of depression. The waiver FRA 091/09 neither included the requirement for regular specific assessments by a psychiatrist nor reduced the time in-between two assessments. Therefore, all the AMEs assessed his psychological and psychiatric fitness, through the usual discussions and observation of behaviour, to determine whether any signs of depression were reappearing, which would have made the waiver invalid and would have required further examination from a specialist. They did not detect any signs of this.

The calculation of the acceptable risk for pilots' in-flight incapacitation is based on the "1% rule" which relies on the presence of a second pilot to take over all the flight duties in the event of the incapacitation of the other pilot. However this is possible only if the second pilot is physically present in the cockpit and if the incapacitation of the other pilot is not due to a mental disorder that results in inadequate or deliberate actions that can put the aircraft into an unsafe condition. Consequently, mental incapacitation should not be treated the same way as physical incapacitation because the risks they generate cannot be mitigated in the same way by the two-pilot operation principle. Therefore, the target of acceptable risk for non-detection of a mental disorder that may result in a voluntary attempt to put the aircraft into an unsafe condition should be more ambitious than the one usually accepted for "*classical*" physical incapacitation risk. If one follows the calculation methodology developed in ICAO's Manual of Civil Aviation Medicine (Doc 8984) and described in paragraph 1.17.2, a quantitative target should be lower by at least two orders of magnitude, or 0.01%.

The review of previous accidents and incidents confirms that actions by a mentally disturbed pilot to purposely crash the aircraft could sometimes not be averted by the other pilot. The review of incidents also shows that the psychological incapacitation of a pilot, even if it does not lead to a deliberate attempt to crash the aircraft, is difficult to control by other crew members and can lead to an unsafe situation. This is why more attention should be paid to the prevention of mental incapacitation, even though the aforementioned quantitative target may be difficult to reach.

Specialists in aerospace medicine and psychiatrists contacted by the BEA generally agree that serious mental illnesses involving sudden psychosis are relatively rare, and their onset is impossible to predict. Moreover, for recurrent mental disorders that come in cycles, crises can leave no traces and when medical visits occur in the calm period of a cycle, the disorders can go undetected. Furthermore, detection tools and methods can remain ineffective in cases where the patient is intentionally hiding any history of mental disorder and/or is faking being in good health. This is why most believe that putting in place extensive psychiatric evaluation as part of routine aeromedical assessments of all pilots would not be productive or cost effective. That would risk generating situations where pilots who are perfectly fit to fly would be kept away from exercising the privilege of their licences for extended periods of time while waiting for long and pointless psychiatric verification.

However it might be useful to reinforce them for pilots with an identified history of mental illness. This was recommended by AsMA in its Pilot Mental Health Working Group. More thorough and/or more frequent psychiatric assessment of those pilots during annual revalidation visits could improve the detection and reduce the risk of possible mental incapacitation in flight. This would probably make it possible to control the risk at a level similar to or better than the currently accepted "1% rule". It is however not demonstrated that this would make it possible to reach the target of 0.01% suggested above. The thoroughness of mental assessment could be increased:

- by improving the training of AMEs in assessing mental health, which was recommended by EASA in the Task Force launched after the accident, by the DfT/CAA Mental Health Working Group and by AsMA in its Pilot Mental Health Working Group;
- by providing guidance for when an AME should seek expert opinion from mental health specialists before making a fit or unfit determination, which was recommended by the BMVI Task Force after the accident, and by AsMA in its Pilot Mental Health Working Group;
- by referring to an independent expert review each time an applicant has a history of mental illness, even in cases when a limitation already exists.

The expression of the risk of in-flight incapacitation in numerical terms is not easy to determine, particularly for conditions that are uncommon, because adequate predictive epidemiological data are not always available for every medical condition. This is particularly true for mental disorders that are still considered as sensitive and somewhat taboo, and therefore under-reported. The search for similar events that was undertaken by the investigation suffered from this reluctance to report as well as from judicial proceedings that were ongoing for some events, which blocked access to certain medical information that would have been useful. Nevertheless and as already recommended by ICAO in its Annex 1, a routine analysis of in-flight incapacitation would help the continuous re-evaluation of the medical assessment criteria and improve the expression of the risk of in-flight incapacitation in numerical terms. This would also make it possible to draw lessons from these events in terms of good operational practices and is particularly relevant to incapacitation related to psychological or psychiatric issues.

### 2.3 Reliability of self-declaration

Managing the risk of having an unfit pilot on board is partially based on the safety assumption that the pilot will self-declare his decrease in medical fitness. The EU Part-MED regulation states that if, in-between two medical examinations, a pilot suffers from a decrease in medical fitness or takes any prescribed or non-prescribed medication which might interfere with flight safety, he/she shall seek the advice of an AME, who will decide whether he/she is fit to resume flying.

Several elements show that the co-pilot was effectively aware of his own decrease in fitness. In December 2014, the co-pilot started to consult various private physicians for vision problems and sleep disorders. These problems could in themselves have decreased his medical fitness. In February 2015, a private physician referred him to a psychotherapist and psychiatrist, and issued him a sick leave certificate. In March 2015, the same private physician recommended him for psychiatric hospital treatment, and issued him another sick leave certificate. The co-pilot had also several sick leave certificates from various physicians in February and March 2015. However, not all of these sick leave certificates were forwarded to Germanwings. Therefore there are times when the co-pilot flew during some of these periods of sick leave, in particular on the day of the accident.

Several elements also show that the co-pilot was aware of the potential interference of his medication with flight safety. He was aware of the risks of this medication, as revealed by the email he sent to his psychiatrist mentioning additional medication.

In spite of this awareness of unfitness to fly and his medication, the co-pilot did not seek any advice from an AME nor did he inform his employer.

Three main factors might have contributed to his failure to self-declare. First, the co-pilot, while suffering from a disease with symptoms of psychiatric disorder, possibly a psychotic depressive episode, had altered mental abilities with a probable loss of connectedness with reality and therefore a lack of discernment. Secondly, the financial consequences of losing his licence would have reached a total of 60,000 €. In addition that would have caused the loss of his income, which was not covered by his loss-of-licence insurance. Moreover, he had not yet fulfilled the conditions to have his full coverage paid for by the airline. Thirdly, the consequence of losing his license would tend to destroy his professional ambitions. Like most professional pilots, the decision to become an airline pilot was probably not solely motivated by the desire to earn a salary but also by a passion for flying aircraft, and also by the positive image conveyed by this profession.

The safety assumption stating that "*the pilot will self-declare his unfitness*" failed in this event.

This raises the question of the relevance of this assumption when the illness affects the person's psyche. The assumption is based on evaluation and decision-making capacity, which are directly affected by the illness itself. The self-declaration principle is therefore weakened when it applies to people consuming psychoactive substances or suffering from psychotic episodes.

The robustness of self-declaration is also questionable when the negative consequences for the pilot seem higher for him/her than the potential impact of a lack of declaration. Pilots are selected for their high motivation, their passion for flying, and their need for achievement. Therefore losing their right to fly might be difficult to accept for pilots, not only in financial terms, but also in terms of self-esteem, social recognition and job motivation. Moreover, the potential impact in terms of safety may be underestimated by pilots, who may overestimate their ability to compensate their decrease in fitness.

Airlines might have different strategies that impact the consequences of unfitness to fly, depending on their size, and on their human resource management organisation. Different strategies are adopted by some organisations in high-risk industries to limit the consequences of unfitness of their agents and to reinforce self-declaration. For example, in the French nuclear industry, employee implication is fostered by the fact that there can be no loss of income due to unfitness. The company would offer another position to an employee who was found unfit, with no modification of his/her salary. In railway transportation, the French company indicated that a train driver declared unfit would be offered a different position, though that might lead to a loss of income. The higher financial investments and the attractiveness linked to a pilot's work exacerbate this issue, and increase the need for measures to limit the consequences of unfitness to fly.

Some regulatory Aviation Authorities adopt another strategy and act on the fitness criteria. They allow aircrew on specific medication treating depression to fly. Such programmes exist in Australia, the UK, Canada and the USA. The modalities differ between countries but all include specific medical assessments, a list of accepted medication (among Selective Serotonin Reuptake Inhibitors, named SSRI), clinical reviews and requirements for stability before being allowed to return to flying duties.

Studies have shown that having programmes allowing pilots to take anti-depressants, under specific conditions and with close medical supervision, is beneficial to flight safety. It counteracts the fact that pilots might choose to fly while depressed, with or without medication. By authorising controlled medication, pilots can be monitored more closely medically. This may also reinforce self-declaration by allowing pilots to declare their depression without fear of being grounded for an excessively long time.

#### **2.4 Balance between patient confidentiality and public safety**

In December 2014, the co-pilot started to suffer from what was possibly a psychotic depressive episode. He went to see several doctors, including:

- a private physician, who referred him to a psychotherapist and psychiatrist one month before the accident, who then diagnosed a possible psychosis two weeks before the accident, and who issued sick leave certificates;
- the psychiatrist treating him, who prescribed anti-depressant medication one month before the accident and other anti-depressants along with sleeping aid medication, eight days before the accident.

None of these health care providers reported any aeromedical concerns to authorities. They abided by the universally-accepted principle of medical confidentiality, which ensures trust between patients and doctors. This principle encourages people to seek medical advice and treatment, with the guarantee that their personal information will be kept confidential. This principle is particularly developed in Germany, where it is specified in the German data protection laws and in the German criminal code. It led them to address the health issues the co-pilot was facing by attempting to convince him to seek additional help and by issuing sick leave certificates. They probably assumed that he would not go to work.

On the one hand, German regulations contain specific provisions to punish doctors violating medical confidentiality, including occupational consequences and imprisonment up to one year. On the other hand, the German criminal code has very general provisions stating that any person who acts to avert an imminent danger does not act unlawfully, if the act committed is an adequate means to avert the danger and if the protected interest substantially outweighs the one interfered with. Consequently, and assuming that a situation where a professional pilot with symptoms of a psychotic disorder is an "*imminent danger*", it could have been possible, at least theoretically, to prevent the copilot from flying, by reporting him to the Aviation Authorities which would then have had to suspend his medical certificate. This supposes however, that doctors were able to report the situation to an authority or organisation which could have declared the pilot unfit to fly.

Legal frameworks in most countries allow doctors to breach medical confidentiality and warn authorities if the disclosure of personal information would lessen or prevent a serious and/or imminent danger or a threat to public safety. In some countries, like Canada, Israel, or Norway, it is even compulsory for health care providers to do so, even without the consent of the patient. A survey conducted by the BEA shows that the absence of formal definition of "*imminent danger*" and "*threat to public safety*" drives doctors to adopt a conservative approach. They will not report any medical information to authorities until there is an obvious and unequivocal threat to third parties or to the patient himself. They adopt such a position, not only because they are strongly attached to the principle of preserving their patients' trust, but also because they fear being sued, exposed to sanctions from judicial authorities and/or losing their right to practice medicine.

The possibility of breaching medical confidentiality is specified in most countries, including Germany, in the general criminal code or penal code. Therefore this applies to the privacy rights of all types of patients, not specifically of pilots. However some countries, like Canada, Israel and Norway have privacy disclosure regulations specifically dedicated to pilots. Having such regulations or guidelines draws more attention to the nature of the risks generated by an unfit pilot and provides a clearer and more secure legal framework for health care providers. An unfit pilot can generate risks not only to his/her own health and personal safety, but also, in the case of airline pilots, to that of the passengers being transported. This can then become a threat to public safety.

Knowing their patient's occupation is a general good practice shared by health care providers. In some countries, it is even compulsory for pilots to inform their doctor about their profession.

Combining the guarantee of knowing the occupation of their patients who are pilots, with regulations allowing and/or mandating health care providers to inform authorities in case pilot unfitness threatens public safety, would create an environment favourable for doctors to report to authorities. The method for reporting to authorities would need to be defined in clear guidelines and reporting should be without legal risk to health care providers.

The various questions relating to the balance between public good and confidentiality favour a global approach that addresses every area of concern, in order to provide better protection for all parties (the patient, the doctor, the public). It is therefore important that evolutions in the regulations address the overall issue of medical confidentiality, but also specifically aviation safety.

## **2.5 Contribution of the social and professional environment in assessing fitness to fly**

The principle of self-declaration in case of pilots experiencing a decrease in medical fitness or commencing regular use of medication was not effective in the case of this accident.

In order to disclose concerns over mental illness, pilots need to overcome the stigma that is attached to mental illness, and the prospects of losing their medical certification and therefore their positions as pilots. Pilots value highly the recognition and support of their peers. The close-knit relationships in the pilot community allow for an understanding and trust between them, which others in their organisation do not necessarily share.

A number of airlines, including Germanwings, have psychological support programmes available to their crews to self-report medical conditions, including emotional and mental health issues, and then seek assistance to find a solution. In theory, these programs, staffed by peers, provide a "safe zone" for pilots by minimizing career jeopardy and the stigma of seeking mental health assistance. The idea is to foster trust in pilots by setting up a non-threatening and confidential environment, with the assurance that fellow pilots are there to help, and do not intend to apportion blame or responsibility.

No record was found that the co-pilot sought any support from peers, for instance through the Mayday foundation or the Anti-Skid programme, although they are available to Germanwings pilots. It could not be determined clearly why he did not use any of these programs. His lack of confidence or knowledge of how they worked, along with his probable fear of losing his privileges to fly, may have prevented him from using these programs.

The professional environment can be effective, in certain circumstances, in detecting psychological issues. Absenteeism or changes in the relationships with colleagues can be used as an indicator of a possible decrease in well-being. Airline pilots work as crewmembers. Interacting with each other and working as a team is a normal part of their flying duties. The use of standard procedures, check-lists and CRM techniques mean that it is expected that pilots work and behave in a shared manner. This enables the recognition of deviations from the anticipated behaviour before, during or after a flight. Interaction between the crew members during flights or during simulator training can help identify an individual who is struggling with any type of emotional or mental problem that may hinder their ability to professionally and effectively serve as a working member of the crew. However, this team work cannot detect pilots suffering from mental illness without obvious symptoms. Its efficiency also relies on the ability of a pilot to associate any unexpected performance or marginal behaviour by another pilot with a possible abnormal mental situation, this being beyond the normal skills of pilots, except in clearly identifiable situations.

The management of decrease in fitness can also be optimized to include peer intervention. Programmes, like ProStans, enable the reporting of pilots who display behavioural or other issues via their peers. The ProStans Committee addresses problems of a professional or ethical nature involving crew members. Peer volunteers resolve allegations of misconduct, or conflicts between crew members, that may affect flight safety and/or professionalism.

The co-pilot had had six documented periods of sickness during the previous three months and had flown on 35 days over that same period. However, none of his colleagues or his manager was able to detect his decrease in fitness. The organisation of an airline and the specificity of pilot duties make subtle changes in behaviour or depression hard to detect. Pilots may fly only a few times with the same pilot.

The personal environment of pilots could also be a means of helping with detection of mental health issues. AsMA recommends that the families of aircrews should be made more aware of mental health issues in aviation, as extended awareness beyond the physician should facilitate greater recognition, reporting and discussion. Pilot support groups could be made known to the families of pilots. Family members could use these groups if they knew they existed and they had the assurance that any mental health issues their loved ones may have would be handled appropriately, with the interests of their career in mind.

Because these programmes work on a confidential basis, without any detailed written reports to preserve pilot's trust, it is hard to determine how well and how frequently they are used by pilots around the world. Peer support systems are well implemented in major airlines, particularly in North America, where just culture principles are well known. However, these types of systems may pose significant implementation challenges when they are applied to organisations of smaller sizes, lower maturity levels and different cultural history. For these peer support groups to be effective, crews need to be assured that mental health issues will not be stigmatized, concerns raised will be handled confidentially, and that pilots will be well-supported with the aim of allowing them to return to flying duties. Within smaller airlines, especially where job security can be in question, more effort could be made to promote successful approaches that improve rates of reporting, discussion and participation.

## **2.6 Security of cockpit access**

Following the 11 September 2001 attacks, several measures were introduced to reduce the risk of unwanted persons entering the cockpit. Reinforced cockpit door systems were mandated at international and European levels, and rules were subsequently fine-tuned to address the safety risks in the areas of rapid aircraft depressurisation, pilot incapacitation, post-crash cockpit access, and door system failure including manual lock use. The vast majority of passenger transport aircraft are compliant with the current set of regulations.

This reinforcement of cockpit doors was motivated by security reasons, assuming that the threat to public security came from outside the cockpit. The consensus worldwide was therefore that security would be tightened by preventing people from entering the flight deck. A potential security threat from inside the cockpit was not fully considered in either the initial phase or the period that followed, when the regulations were fine-tuned. It was assumed moreover that security threats outweighed safety concerns, given the fact that crew incapacitation was already taken into account. The risk of terrorist attack was considered to be more threatening than pilot suicide.

The scenario of this accident and previous events identified during the investigation bring to light the threat within the cockpit, which current cockpit door systems and procedures are not designed to address. A door cannot address a risk that could be present from both sides.

Shortly after the accident EASA issued an SIB recommending that airlines ensure that at least two crew, including at least one qualified pilot, are in the cockpit at all times throughout the flight, in order to address the risks associated with flight crew members leaving the cockpit during non-critical phases of flight. This "*2-person in the cockpit*" rule could enable a trained flight attendant to unlock the door in case of an emergency situation like the one experienced during the accident. In addition, this rule means that a person is physically present next to a pilot who might want to commit suicide, which could contribute to breaking the cognitive constriction of the suicidal person, and therefore could prevent the suicide. However, some of the previous events listed in 1.18.1 show that even with two persons in the cockpit (i.e. two pilots), a suicide remains possible. This "*2-person in the cockpit*" rule cannot fully mitigate the risk of suicide, although it is likely to make it more difficult. In addition, this rule may introduce new security risks by allowing an additional person inside the flight deck. Consequently, the BEA acknowledges the potential safety benefits of the "*2-person in the cockpit*" rule, although the security risks and training needs for the staff performing the tasks of that second person have to be carefully assessed.

Several new cockpit door designs could be imagined to improve safety by allowing the door to be unlocked from outside the cockpit, even if the pilot(s) inside wanted to block the access in particular:

- the use of pre-recorded finger prints for the flight crew to gain access to the cockpit in case of emergency;
- the use of keys located in the flight deck to open the cockpit door from the passenger compartment when one of the pilots leaves and takes out a key with him/her;
- the displacement of the reinforced cockpit door aft of the lavatory compartment to include the lavatory in the cockpit area. This would enable one of the pilots to access the lavatory while preventing unauthorized people from accessing the cockpit. This would remove one of the lavatory required for passenger use.

However, these examples are all at the detriment of security or bring additional cost with little or no additional benefit to security. The risk of illicit attacks in flight being considered more threatening than the scenario of this accident, the BEA has not issued any safety recommendation concerning the modification of cockpit door designs.

### 3 - CONCLUSIONS

#### 3.1 Findings

##### General findings

- the aeroplane had a valid Certificate of Airworthiness;
- A review of the FDR and CVR data brought to light no aircraft system failures or faults that could have contributed to the accident;
- the aeroplane's maintenance documentation did not mention any system failures that were incompatible with the flight as planned;
- the flight crew possessed the licences and ratings required to perform the flight;
- the co-pilot obtained his class 1 medical certificate without restrictions in April 2008, valid for one year;
- a depressive episode and the taking of medication to treat it delayed the renewal of the copilot's class 1 medical certificate between April and July 2009;
- from July 2009, the co-pilot's medical certificate was endorsed with the note «*Note the special conditions/restrictions of the waiver FRA 091/09 -REV-*»;
- the co-pilot's MPL(A), issued in February 2014, was endorsed with the remark "\*\*\*\*SIC\*\*incl. PPL\*\*\*\*";
- the co-pilot class 1 medical certificate was regularly revalidated or renewed from 2010 to 2014 at the Lufthansa AeMC. All the AMEs who examined him during that period were aware of the waiver FRA 091/09 and his history of depression;
- the waiver FRA 091/09 neither included the requirement for regular specific assessments by a psychiatrist nor reduced the time in-between two assessments;
- his last class 1 medical examination took place on 28 July 2014;
- no psychiatrist or psychologist was involved in the copilot's class 1 medical certificate revalidation/renewal process after the issuance of the waiver FRA 091/09;
- the co-pilot had a loss of licence insurance that would have given him a one-time payment of about 60,000€ which corresponds approximately to his pilot training expenses, but he did not have any additional insurance covering the risk of loss of income resulting from unfitness to fly;
- peer support groups are available to Germanwings pilots.

##### Findings relevant to the period between December 2014 and the day of the accident

- the copilot suffered from a mental disorder with psychotic symptoms;
- anti-depressant and sleeping aid medication was prescribed to the co-pilot;
- the co-pilot did not contact any AME;
- no record was found that the co-pilot sought any support from peers;
- the co-pilot went on flying as a commercial pilot carrying passengers;
- the mental state of the co-pilot did not generate any reported concern from the pilots who flew with him;
- a private physician referred the co-pilot to a psychotherapist and psychiatrist one month before the accident and diagnosed a possible psychosis two weeks before the accident;
- the psychiatrist treating the co-pilot prescribed anti-depressant medication one month before the accident and other anti-depressants along with sleeping aid medication eight days before the accident;
- no health care providers reported any aeromedical concerns to authorities;
- no aviation authority, or any other authority, was informed of the mental state of the co-pilot.

**Findings relevant to the first flight of the day of the accident (from Düsseldorf to Barcelona)**

- the aircraft took off from Düsseldorf at 6 h 01;
- several altitude selections towards 100 ft were recorded during descent on the flight that preceded the accident flight, while the co-pilot was alone in the cockpit;
- the aircraft landed in Barcelona at 7 h 57.

**Findings relevant to the second flight of the day of the accident (from Barcelona to Düsseldorf)**

- the aeroplane took off from Barcelona bound for Düsseldorf at 9 h 00, with flight number 4U9525, and callsign GWI18G;
- the autopilot and autothrust were engaged during the climb;
- the Captain left the cockpit at the beginning of the cruise at FL380;
- the selected altitude changed from 38,000 ft to 100 ft while the co-pilot was alone in the cockpit. The aeroplane then started a continuous and controlled descent on autopilot;
- during the descent, the Marseille control centre called flight GWI18G on eleven occasions on three different frequencies, without any answer being transmitted;
- the French military defence system tried to contact flight GWI18G on three occasions during the descent, without any answer;
- the buzzer to request access to the cockpit sounded once during the descent, 4 min 07 s after the Captain had left;
- the intercom sounded in the cockpit, 4 min 40 s after the Captain had left;
- three other calls on the interphone sounded in the cockpit;
- none of the calls using the interphone elicited any answer;
- noises similar to violent blows on the cockpit doors were recorded on five occasions;
- the cockpit doors of the aircraft are designed for security reasons to resist penetration by small arms fire and grenade shrapnel and to resist forcible intrusions by unauthorized persons;
- an input on the right sidestick was recorded for about 30 seconds on the FDR 1 min 33 s before the impact, not enough to disengage the autopilot;
- the autopilot and autothrust remained engaged until the end of the CVR and FDR recordings;
- the sound of breathing was recorded on the CVR until a few seconds before the end of the flight;
- before the collision with the terrain, warnings from the GPWS, Master Caution and Master Warning sounded;
- the aeroplane collided with the terrain at 9 h 41 min 06.

### 3.2 Causes

The collision with the ground was due to the deliberate and planned action of the co-pilot who decided to commit suicide while alone in the cockpit. The process for medical certification of pilots, in particular self-reporting in case of decrease in medical fitness between two periodic medical evaluations, did not succeed in preventing the co-pilot, who was experiencing mental disorder with psychotic symptoms, from exercising the privilege of his licence.

The following factors may have contributed to the failure of this principle:

- the co-pilot's probable fear of losing his ability to fly as a professional pilot if he had reported his decrease in medical fitness to an AME;
- the potential financial consequences generated by the lack of specific insurance covering the risks of loss of income in case of unfitness to fly;
- the lack of clear guidelines in German regulations on when a threat to public safety outweighs the requirements of medical confidentiality.

Security requirements led to cockpit doors designed to resist forcible intrusion by unauthorized persons. This made it impossible to enter the flight compartment before the aircraft impacted the terrain in the French Alps.

# Exhibit B



US Department  
of Transportation  
**Federal Aviation  
Administration**

Mike Monroney Aeronautical Center  
Civil Aerospace Medical Institute (CAMI)  
Aerospace Medical Certification Division

P.O. Box 25082  
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**APR 24 2015**

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Ref: Andreas Guenter Lubitz  
PI # 2169319  
APP ID # 2001587238  
FOIA# 2015-004666CA

Dear Ms. Harrison:

This letter responds to your e-mailed Freedom of Information Act request of March 31, 2015, seeking documents pertaining to "Andreas Guenter Lubitz's medical certificates including any records showing what medical certification tests Lubitz had taken in the past 10 years ... copy of the 3rd class medical certificate ...copy of Lubitz's student pilots license certificate ..." Your correspondence was assigned to the Civil Aerospace Medical Institute ("CAMI") for responsive records pertaining to medical certification. Your request was received in our office on April 3, 2015.

Subsequent to a diligent search of records within its custody, CAMI has identified the medical certification file for Airman Lubitz as being responsive to your request. We are disclosing Airman Lubitz's medical certification file, in its entirety, except for redaction of the identifying information of consulting/treating medical professionals and personal home address and telephone number of Mr. Lubitz. To disclose the identity of these medical professionals would constitute an unwarranted invasion of personal privacy. Furthermore to disclose the personal home address and phone number would constitute an unwarranted invasion of the surviving family of Mr. Lubitz. Accordingly, we have redacted certain identifying information pursuant to Exemption (b) (6) of the Freedom of Information Act and 49 C.F.R. § 7.13 of the Department's Regulations.

In considering your request, we referred to Department of the Air Force V. Rose, 425 U.S. 352, 372 (1989) which held that where a privacy interest is found to exist, a balancing between the rights of the individual concerned and any public interest in disclosure must be performed. Further, we considered Department of Justice v. Reporters Committee for Freedom of the Press, 109 S. Ct. 1468, 1483 (1989) which held that if, on balance, personal data would not contribute significantly to the public understanding of the operation or activities of the government then the information is protected from disclosure.

In the present request, the requested medical information is not considered "basic information." Therefore, the routine use which allows the disclosure of basic airman information, under the Privacy Act, does not apply. Further, information shared between treating medical professionals and their patients is generally privileged. A consulting or treating medical professional would not expect to see the facts surrounding his relationship with a patient subjected to public scrutiny. Additionally the surviving family members have a reasonable expectation to be free from unreasonable intrusion. Accordingly, we have determined that a privacy interest exists.

Page 2

PI # 2169319  
MID # 200004752955  
APP ID # 2001587238  
Andreas Guentler Lubitz

Regarding the public interest, public knowledge of individual names of consulting/treating medical professionals would not contribute significantly to the public understanding of the operation or activities of the government. Similarly the personal home address and telephone number of Mr. Lubitz does not shed any light on the activities of the government. On balance, the privacy interests outweigh the public interest in the release of identifying personal information.

The undersigned is responsible for this partial denial. You may request reconsideration of this response by writing the Assistant Administrator for Finance and Management (AFN-1), Federal Aviation Administration, 800 Independence Ave. S.W., Washington, D.C. 20591. Your request for reconsideration must be made in writing within 30 days from the date of receipt of this letter and must include all information and arguments relied upon. Your letter must state that it is an appeal from the above-described denial of a request made under the FOIA. The envelope containing the appeal should be marked "FOIA."

If we can be of further service, please let us know.

Sincerely,



Melchor J. Antuñano, M.D.  
Director, Civil Aerospace Medical Institute

Enclosure

MJA/klh

P.S. Additionally, Wesley Bruer, CNN, has made a similiar FOIA request.



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Mike Monroney Aeronautical Center  
Civil Aerospace Medical Institute (CAMI)  
Aerospace Medical Certification Division

P.O. Box 26080  
Oklahoma City, OK 73125-9914

July 08, 2010

ANDREAS GUENTER LUBITZ  
[REDACTED]

GERMANY

Ref: PI# 2169319  
App ID# 2001587238

Dear Mr. Lubitz:

Your report of physical examination has been received. Based upon our review of the information submitted, we are unable to establish your eligibility to hold an airman medical certificate at this time.

Due to your history of reactive depression, please submit a current detailed status report from your prescribing physician. The report should include the date medication(s) were discontinued and confirmation of no recurrence of symptoms since discontinuing medication(s). The report should also include diagnosis, prognosis without medication(s), follow-up plan, and copies of treatment records.

Upon review of the aforementioned information, additional data may be required.

Following our review of the requested data, we will notify you regarding your eligibility for medical certification. We will appreciate your use of the above reference numbers on any correspondence.

Please note that your medical certification has not been denied at this time; however, if no reply is received within 30 days from the date of this letter, we will have no alternative except to deny your application in accordance with Title 14 of the Code of Federal Regulations (CFRs), Section 67.413.

Sincerely,

*Sandy Clymer*

Warren S. Silberman, D.O., M.P.H.  
Manager, Aerospace Medical Certification Division  
Civil Aerospace Medical Institute

cc: Joerg Siedenburg M.D.

skc/tdz

Airman MedXPress Exam Submittal Process  
For DIWS Exam (MID) Number: 200004752955

Page: 1

## MedXPress

Applicant Name:	Andreas Guenter Lubitz
Applicant DOB:	12/18/1987
MedXPress Account Name:	andreaslubitz@aol.com
IP Address Used:	87.168.119.27
Exam Create Date:	06/14/2010
Exam Signed/Submitted On:	06/14/2010
Exam Confirmation Number:	38873566
Correct User Password was used by MedXPress applicant for submission:	Yes

## AMCS

Import Date:	06/18/2010
Exam Imported for AME Name/Number:	JOERG SIEDENBURG / 3015
Exam Imported from MedXPress	JORG SIEDENBURG
by Submit Date:	6/18/2010
Exam Submitted to FAA On:	06/18/2010
Exam Submitted for AME Name/Number:	JOERG SIEDENBURG / 3015
Exam Submitted to FAA by:	JORG SIEDENBURG
DIWS MID Number:	200004752955
Exam Modification(s) by AME:	See Modification Comments below.
AME certified that Exam Modifications were approved by applicant:	Yes

18M.In the mean-time there was a brief period of a reactive depression caused by a decompensation subsequent to excessive demands . The applicant was evaluated by [REDACTED] and found fit for JAR-FCL 3 Class 1 Medical fitness.;

**Applicant Must Complete ALL 20 Items (Except For Shaded Areas) PLEASE PRINT**

Form Approved OMB NO. 2120-0034

Copy of FAA Form 8500-8  
Medical Certificate (Part 67)  
Print 8500-8 (Medical and Student Pilot Certificate)  
Not Certified by U.S. Department of Transportation

**MEDICAL CERTIFICATE AND STUDENT PILOT CERTIFICATE**

This certifies that (Full name and address):  
ANDREAS LUBITZ  
has met the medical standards prescribed in part 67, Federal Aviation Regulations for this class of Medical Certificate.

**Limitations:** [Redacted]

**Before Examination:** Examiner's Designation: [Redacted]

**Printed Name:** [Redacted]

**AIRMAN'S SIGNATURE:** [Redacted]

1. Application For: <input type="checkbox"/> Airman Medical Certificate <input checked="" type="checkbox"/> Airman Medical and Student Pilot Certificate	2. Class of Medical Certificate Applied For: <input type="checkbox"/> 1st <input type="checkbox"/> 2nd <input checked="" type="checkbox"/> 3rd		
3. Last Name LUBITZ	First Name ANDREAS	Middle Name Guenther	
4. Social Security Number 888-07-0535			
5. Address Number / Street [Redacted]	Telephone Number [Redacted]		
City [Redacted]	State/Country [Redacted]	Zip Code [Redacted]	
6. Date of Birth 12/18/1987 Citizenship Germany	7. Color of Hair BLOND	8. Color of Eyes BLUE	9. Sex Male
10. Type of Airman Certificate(s) You Hold: <input checked="" type="checkbox"/> None <input type="checkbox"/> ATC Specialist <input type="checkbox"/> Flight Instructor <input type="checkbox"/> Recreational <input type="checkbox"/> Airline Transport <input type="checkbox"/> Flight Engineer <input type="checkbox"/> Private <input type="checkbox"/> Other <input type="checkbox"/> Commercial <input type="checkbox"/> Flight Navigator <input type="checkbox"/> Student			
11. Occupation Student Pilot	12. Employer Lufthansa Flight Training		
13. Has Your FAA Airman Medical Certificate Ever Been Denied, Suspended, or Revoked? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, give date			
14. To Date 0	15. Past 6 months 0	16. Date of Last FAA Medical Application 04/09/2008	<input type="checkbox"/> No Prior Application
17.a. Do You Currently Use Any Medication (Prescription or Nonprescription)? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If yes, below list medication(s) used and check appropriate box). Previously Reported Yes <input type="checkbox"/> No <input type="checkbox"/>			
17.b. Do You Ever Use Near Vision Contact Lens(es) While Flying? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			

18. Medical History - HAVE YOU EVER IN YOUR LIFE BEEN DIAGNOSED WITH, HAD, OR DO YOU PRESENTLY HAVE ANY OF THE FOLLOWING? Answer "yes" or "no" for every condition listed below. In the EXPLANATIONS box below, you may note "PREVIOUSLY REPORTED, NO CHANGE" only if the explanation of the condition was reported on a previous application for an airman medical certificate and there has been no change in your condition.

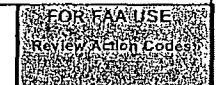
See Instructions Page

Yes	No	Condition	Yes	No	Condition	Yes	No	Condition	Yes	No	Condition
a. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Frequent or severe headaches	g. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Heart or vascular trouble	m. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Mental disorders of any sort, depression, anxiety, etc.	r. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Military medical discharge
b. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Dizziness or fainting spell	h. <input type="checkbox"/>	<input checked="" type="checkbox"/>	High or low blood pressure	n. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Substance dependence or failed a drug test ever, or substance abuse or use of illegal substance in the last 2 years.	s. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Medical rejection by military service
c. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Unconsciousness for any reason	i. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Stomach, liver, or intestinal trouble	o. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Alcohol dependence or abuse	u. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Rejection for life or health insurance
d. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Eye or vision trouble except glasses	j. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Kidney stone or blood in urine	p. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Suicide attempt	x. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Admission to hospital
e. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Hay fever or allergy	k. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Diabetes	q. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Motion sickness requiring medication	y. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Other illness, disability, or surgery
f. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Asthma or lung disease	l. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Neurological disorders; epilepsy, seizures, stroke, paralysis, etc.						Medical disability benefits

Arrest, Conviction, and/or Administrative Action History --- See Instructions Page

Yes	No	History of (1) any arrest(s) and/or conviction(s) involving driving while intoxicated by, while impaired by, or while under the influence of alcohol or a drug; or (2) history of any arrest(s), and/or conviction(s), and/or administrative action(s) involving an offense(s) which resulted in the denial, suspension, cancellation, or revocation of driving privileges or which resulted in attendance at an educational or a rehabilitation program.	Yes w. <input type="checkbox"/>	No <input checked="" type="checkbox"/>	History of nontraffic conviction(s) (misdemeanors or felonies).
-----	----	---	------------------------------------	---	---

Explanations: See Instructions Page

19. Visits to Health Professional Within Last 3 Years.  Yes (Explain Below)  No See Instructions Page

Date	Name, Address, and Type of Health Professional Consulted	Reason

**- NOTICE -**

Whoever in any matter within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or who makes any false, ridiculous or fraudulent statements or representations, or entry, may be fined up to \$250,000 or imprisoned not more than 5 years, or both. (18 U.S. Code Secs. 1001; 3571).

I hereby authorize the National Driver Register (NDR), through a designated State Department of Motor Vehicles, to furnish to the FAA information pertaining to my driving record. This consent constitutes authorization for a single access to the information contained in the NDR to verify information provided in this application. Upon my request, the FAA shall make the information received from the NDR, if any, available for my review and written comment. Authority: 23 U.S. Code 401, Note.

NOTE: ALL persons using this form must sign it. NDR consent, however, does not apply unless this form is used as an application for Medical Certificate or Medical Certificate and Student Pilot Certificate.

I hereby certify that all statements and answers provided by me on this application form are complete and true to the best of my knowledge, and I agree that they are to be considered part of the basis for issuance of any FAA certificate to me. I have also read and understand the Privacy Act statement that accompanies this form.

Electronically signed by : andreaslubitz@aol.com / Password Verified

Date 06/14/2010

**Form 8500-8 Continuation Sheet**

**17.a. Medications (From page 1):**  
Medication

Previously Reported  
 Yes       No

**18. Explanations (From page 1):**

**19. Visits to Health Professional Within Last 3 Years. (From page 1):**

Applicant Must Complete ALL 20 Items (Except For Shaded Areas)**PLEASE PRINT**

Form Approved OMB NO. 2120-0034

**GX-0260689**

**MEDICAL CERTIFICATE THIRD CLASS  
AND STUDENT PILOT CERTIFICATE**

This certifies that [Redacted]  
ANDREAS LUBITZ  
[Redacted]

Date of Birth	Height	Weight	Gender	Citizen	Residence
06/18/1987	5'8"	150 lbs	Male	Germany	[Redacted]

I have met the medical standards prescribed in Part 67, Federal Aviation Regulations, for this class of Medical Certificate.

**Limitations:**  
None

**Date of Birth:** 06/18/1987 **Examiner's Dignification No.:** 06/18/2010

**Signature:** ANDREAS LUBITZ  
**Type of Name:** ANDREAS LUBITZ  
**Family Name:** LUBITZ  
**Middle Name:** ANDREAS  
**Surname:** LUBITZ

**AIRMAN'S SIGNATURE:** ANDREAS LUBITZ

1. Application For:  Airman Medical Certificate  Airman Medical and Student Pilot Certificate

2. Class of Medical Certificate Applied For:  1st  2nd  3rd

3. Last Name: LUBITZ First Name: ANDREAS Middle Name: Guenter

4. Social Security Number: 888-07-0535

5. Address Number / Street: [Redacted] Telephone Number: [Redacted]

City: [Redacted] State/Country: [Redacted] Zip Code: [Redacted]

6. Date of Birth: 12/18/1987 7. Color of Hair: BLOND 8. Color of Eyes: BLUE 9. Sex: Male

Citizenship: Germany

10. Type of Airman Certificate(s) You Hold:  
 None  ATC Specialist  Flight Instructor  Recreational  
 Airline Transport  Flight Engineer  Private  Other  
 Commercial  Flight Navigator  Student

11. Occupation: Student Pilot 12. Employer: Lufthansa Flight Training

13. Has Your FAA Airman Medical Certificate Ever Been Denied, Suspended, or Revoked?  
 Yes  No If yes, give date

Total Pilot Time (Civilian Only)

14. To Date	15. Past 6 months	16. Date of Last FAA Medical Application
0	0	04/09/2008

17.a. Do You Currently Use Any Medication (Prescription or Nonprescription)?  
 No  Yes (If yes, below list medication(s) used and check appropriate box). Previously Reported  

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

17.b. Do You Ever Use Near Vision Contact Lens(es) While Flying?  Yes  No

18. Medical History - HAVE YOU EVER IN YOUR LIFE BEEN DIAGNOSED WITH, HAD, OR DO YOU PRESENTLY HAVE ANY OF THE FOLLOWING? Answer "yes" or "no" for every condition listed below. In the EXPLANATIONS box below, you may note "PREVIOUSLY REPORTED, NO CHANGE" only if the explanation of the condition was reported on a previous application for an airman medical certificate and there has been no change in your condition. See Instructions Page

Yes	No	Condition	Yes	No	Condition	Yes	No	Condition			
a. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Frequent or severe headaches	g. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Heart or vascular trouble	m. <input checked="" type="checkbox"/>	<input type="checkbox"/>	Mental disorders of any sort; depression, anxiety, etc.	f. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Military medical discharge
b. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Dizziness or fainting spell	h. <input type="checkbox"/>	<input checked="" type="checkbox"/>	High or low blood pressure	n. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Substance dependence or failed a drug test ever; or substance abuse or use of illegal substance in the last 2 years.	s. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Medical rejection by military service
c. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Unconsciousness for any reason	i. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Stomach, liver, or intestinal trouble	l. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Rejection for life or health insurance			
d. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Eye or vision trouble except glasses	j. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Kidney stone or blood in urine	o. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Alcohol dependence or abuse	u. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Admission to hospital
e. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Hay fever or allergy	k. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Diabetes	p. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Suicide attempt	x. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Other illness, disability, or surgery
f. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Asthma or lung disease	l. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Neurological disorders; epilepsy, seizures, stroke, paralysis, etc.	q. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Motion sickness requiring medication	y. <input type="checkbox"/>	<input checked="" type="checkbox"/>	Medical disability benefits

Arrest, Conviction, and/or Administrative Action History -- See Instructions Page

Yes	No	History of (1) any arrest(s) and/or conviction(s) involving driving while intoxicated by, while impaired by, or while under the influence of alcohol or a drug; or (2) history of any arrest(s), and/or conviction(s), and/or administrative action(s) involving an offense(s) which resulted in the denial, suspension, cancellation, or revocation of driving privileges or which resulted in attendance at an educational or a rehabilitation program.	Yes	No	History of nontraffic conviction(s) (misdemeanors or felonies).
-----	----	---	-----	----	---

Explanations: See Instructions Page

18m: Reactive depression November 2008 - July 2009. No sequelae of depressive period.; 18m - Reactive depression November 2008 - July 2009.; **FOR FAIR USE**  
Review Action Dates

19. Visits to Health Professional Within Last 3 Years.  Yes (Explain Below)  No See Instructions Page

Date	Name, Address, and Type of Health Professional Consulted	Reason

- NOTICE - Whoever in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or who makes any false, fictitious or fraudulent statements or representations, or entry, may be fined up to \$250,000 or imprisoned not more than 5 years, or both. (18 U.S. Code Secs. 1001; 5571).

20. Applicant's National Driver Register and Certifying Declarations

I hereby authorize the National Driver Register (NDR), through a designated State Department of Motor Vehicles, to furnish to the FAA information pertaining to my driving record. This consent constitutes authorization for a single access to the information contained in the NDR to verify information provided in this application. Upon my request, the FAA shall make the information received from the NDR, if any, available for my review and written comment. Authority: 23 U.S. Code 401. Note.

NOTE: ALL persons using this form must sign it. NDR consent, however, does not apply unless this form is used as an application for Medical Certificate or Medical Certificate and Student Pilot Certificate.

I hereby certify that all statements and answers provided by me on this application form are complete and true to the best of my knowledge, and I agree that they are to be considered part of the basis for issuance of any FAA certificate to me. I have also read and understand the Privacy Act statement that accompanies this form.

Signature of Applicant: \_\_\_\_\_ Date: 06/14/2010

**NOTE: FAA/Original Copy of the Report of Medical Examination Must be TYPED.**

REPORT OF MEDICAL EXAMINATION										
21. Height (inches)	22. Weight (pounds)	23. Statement of Demonstrated Ability (SODA) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Defect Noted:					24. SODA Serial Number			
CHECK EACH ITEM IN APPROPRIATE COLUMN		Normal	Abnormal	CHECK EACH ITEM IN APPROPRIATE COLUMN					Normal	Abnormal
25. Head, face, neck, and scalp		X		37. Vascular system (Pulse, amplitude and character; arms, legs, others)					X	
26. Nose		X		38. Abdomen and viscera (including hernia)					X	
27. Sinuses		X		39. Anus (Not including digital examination)					X	
28. Mouth and throat		X		40. Skin					X	
29. Ears, general (Internal and external canals; Hearing under item 49)		X		41. G-U system (Not including pelvic examination)					X	
30. Ear Drums (Perforation)		X		42. Upper and lower extremities (Strength and range of motion)					X	
31. Eyes, general (vision under items 50 to 54)		X		43. Spine, other musculoskeletal					X	
32. Ophthalmoscopic		X		44. Identifying body marks, scars, tattoos (Size & location)					X	
33. Pupils (Equality and reaction)		X		45. Lymphatics					X	
34. Ocular motility (Associated parallel movement, nystagmus)		X		46. Neurologic (Tendon reflexes, equilibrium, senses, cranial nerves, coord., etc.)					X	
35. Lungs and chest (Not including breast examination)		X		47. Psychiatric (Appearance, behavior, mood, communication, and memory)					X	
36. Heart (Precordial activity, rhythm, sounds, and murmur)		X		48. General systemic					X	

NOTES: Describe every abnormality in detail. Enter applicable item number before each comment. Use additional sheets if necessary and attach to this form.

none

49. Hearing	Record Audiometric Speech Discrimination Score Below	Right Ear	Left Ear			
Conversational Voice Test at 6 Feet <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail		Audiometer	500 1000 2000 3000 4000	500 1000 2000 3000 4000		
		Threshold in decibels				
50. Distant Vision		51.a. Near Vision	51.b. Intermediate Vision - 32 Inches	52. Color Vision		
Right 20/20	Corrected to 20/	Right 20/20	Corrected to 20/	<input checked="" type="checkbox"/> Pass		
Left 20/20	Corrected to 20/	Left 20/20	Corrected to 20/	<input type="checkbox"/> Fail		
Both 20/20	Corrected to 20/	Both 20/20	Corrected to 20/			
53. Field of Vision <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Abnormal		54. Heterophoria 20' (in prism diopters)	Esophoria	Exophoria	Right Hyperphoria	Left Hyperphoria
			0	0	0	0
55. Blood Pressure (Sitting, mm of Mercury)		56. Pulse (Resting)	57. Urine Test (If abnormal, give results)	Albumin	Sugar	58. ECG (Date)
130 / 90		64	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Abnormal	Normal	Normal	MM DD YYYY

59. Other Tests Given

60. Comments on History and Findings: AME shall comment on all "YES" answers in the Medical History section and for abnormal findings of the examination. (Attach all consultation reports, ECGs, X-rays, etc. to this report before mailing.)	FOR FAA USE Pathology Codes Coded By Clinical Report
18m: In the mean-time there was a brief period of a reactive depression caused by a decompensation subsequent to excessive demands . The applicant was evaluated by [REDACTED] and found fit for JAR-FCL 3 Class 1 Medical fitness. Applicant is continuing as a flight student without any further abnormalities and was found fit for JAR-FCL Class medical fitness. Page 1 has been modified: 18M->18m changed from N to Y   Modification comments from AME:18M.In the mean-time there was a brief period of a reactive depression caused by a decompensation subsequent to excessive demands . The applicant was evaluated by [REDACTED] and found fit for JAR-FCL 3 Class 1 Medical fitness.;	

Significant Medical History <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Abnormal Physical Findings <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
61. Applicant's Name ANDREAS Guenter LUBITZ	62. Has Been Issued - <input type="checkbox"/> Medical Certificate <input type="checkbox"/> Medical & Student Pilot Certificate <input checked="" type="checkbox"/> No Certificate Issued - Deferred for Further Evaluation <input type="checkbox"/> FAA ATC-Deferred - No Certificate Issued <input type="checkbox"/> Has Been Denied - Letter of Denial Issued (Copy Attached)

63. Disqualifying Defects (List by item number)
---

Date of Examination MM DD YYYY 06/18/2010	Aviation Medical Examiner's Name JOERG SIEDENBURG Street Address WEG BEIM JAGER 193, GEB 126 City HAMBURG State Zip Code 22313	Aviation Medical Examiner's Signature AME Serial Number 03015 AME Telephone 696-964-7624
---	--	--

## Form 8500-8 Continuation Sheet

Applicant Name : ANDREAS Guenter LUBITZ  
 Applicant MID : 200004752955

## 17.a. Medications (From page 1):

Medication

Previously Reported

Yes No

## 18. Explanations (From page 1):

## 19. Visits to Health Professional Within Last 3 Years. (From page 1);

## Notes (From page 2):

none

## Other Tests Given (From page 2):

## Comments on History and Findings (From page 2):

18m; In the mean-time there was a brief period of a reactive depression caused by a decompensation subsequent to excessive demands . The applicant was evaluated by [REDACTED] and found fit for JAR-FCL 3 Class 1 Medical fitness. Applicant is continuing as a flight student without any further abnormalities and was found fit for JAR-FCL Class medical fitness. Page 1 has been modified; 18M>>18m changed from N to Y|| Modification comments from AME>18M.In the mean-time there was a brief period of a reactive depression caused by a decompensation subsequent to excessive demands . The applicant was evaluated by [REDACTED] and found fit for JAR-FCL 3 Class 1 Medical fitness.;

## AME Actions:

## Applicant Previously Assessed

- 1. Has OSA diagnosis and is on Special Issuance. Reports to follow.
- 2. Has OSA diagnosis and is currently being treated OR has had previous OSA assessment NOT on Special Issuance. Reports to follow.

## Applicant Not at Risk

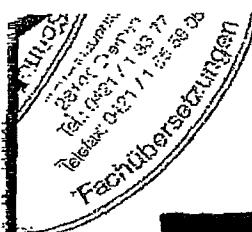
- 3. Determined to NOT be at risk for OSA at this examination.

## Applicant at Risk/Severity to be Assessed

- 4. Discuss OSA risk with airman and provide educational materials.
- 5. At risk for OSA. AASM sleep apnea assessment required. Reports to follow.

## Applicant Risk/Severity high

- 6. Deferred. Immediate safety risk. AASM sleep apnea assessment required. Reports to follow.



Certified translation from German

[REDACTED]  
Medical specialist for psychiatry and psychotherapy  
[REDACTED]

Phone: [REDACTED]  
Fax: [REDACTED]

[REDACTED]  
Clinic  
[REDACTED]  
[REDACTED]

[REDACTED] on 10<sup>th</sup> July, 2009

Andreas Lubitz, born on 18<sup>th</sup> December, 1987, [REDACTED]

Dear Colleague,

**Anamnesis:**

A considerable remission has been obtained by medication with Cipralex and Mirtazapin, as well as by a psychotherapeutic treatment. Finally, the medication has been tapered.

**Psychopathologic findings:**

Patient alert and mentally fully oriented, with no retentivity or memory disorders; formal train of thoughts without pathologic findings; no phobias and compulsions; no delusion; no alusia or depersonalisation; emotionally stable; oscillatory; capable of exercise; no sleep disorders.

**Diagnosis:**

(ICD:F32.2G) Severe depressive episode without psychotic symptoms in complete remission

**Epierisis and therapy:**

In the case of Mr. Lubitz, modified living conditions caused the onset of a depressive episode. By a drug therapy and a psychotherapeutic treatment, which enabled him to develop the sufficient resources for getting on with similar situations in the future, the complete remission was obtained. The medication could be stopped.

Mr. Lubitz completely recovered, there is not any residuum remained. The treatment has been finished.

Best regards  
[REDACTED]

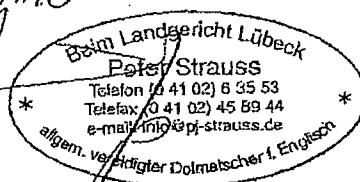
This report is computer-generated, hence it is valid without signature.  
On demand, we shall gladly send you a copy with signature.

7810 AUG - 3 A 4 08  
OKLAHOMA CITY, OK  
FEDROSPACÉ MEDICINE  
OFFICE OF

*The correctness and completeness of the above  
translation from German is hereby certified.*

Grosshansdorf, 21.7.10

Peter Strauss



*Translator for English, officially authorised for the  
courts and public prosecution authorities of the Federal  
State Schleswig-Holstein.*



Dipl.-Psych. [REDACTED]  
Fachtherapeut für Kinder und Jugendliche  
Dipl.-Psych. [REDACTED]  
Telefon: 0421 / 13 77  
Fax: 0421 / 65 58 06

Certified translation from German

Dipl.-Psych. [REDACTED]

Psychological psychotherapist  
Psychotherapist for children and juveniles

Mr.  
Andreas Lubitz  
[REDACTED]

[REDACTED]  
Phone: [REDACTED]  
Fax: [REDACTED]

23<sup>rd</sup> February, 2010

**Psychological Psychotherapeutic Certificate**

Mr. Andreas Lubitz, born on 18<sup>th</sup> December, 1987, resident in [REDACTED], was under my psychotherapeutic treatment from January to October 2009. Mr. Lubitz' high motivation and active participation contributed to the successful completion of the treatment, after the management of symptoms.

Dipl.-Psych. [REDACTED]  
Psychological psychotherapist  
Psychotherapist for children and juveniles

*Signature*



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Mike Monroney Aeronautical Center  
Civil Aerospace Medical Institute (CAMI)  
Aerospace Medical Certification Division

P.O. Box 26080  
Oklahoma City, OK 73125-9914

July 28, 2010

ANDREAS GUENTER LUBITZ  
[REDACTED]

GERMANY

Ref: PI# 2169319  
App ID# 2001587238

Dear Mr. Lubitz:

Our review of your medical records has established that you are eligible for a third-class medical certificate.

Enclosed is your medical certificate. It requires your signature.

You are cautioned to abide by Title 14 of the Code of Federal Regulations (CFRs), Section 61.53, relating to physical deficiency. Because of your history of reactive depression, operation of aircraft is prohibited at any time new symptoms or adverse changes occur or any time medication and/or treatment is required.

Use of the above reference numbers on future correspondence and/or reports will aid us in locating your file.

Sincerely,

*Sandy Clymer* for

Warren S. Silberman, D.O., M.P.H.  
Manager, Aerospace Medical Certification Division  
Civil Aerospace Medical Institute

Enclosure

cc: Joerg Siedenburg M.D.

skc

UNITED STATES OF AMERICA Department of Transportation Federal Aviation Administration			GX-0260689		
<b>MEDICAL CERTIFICATE THIRD CLASS AND STUDENT PILOT CERTIFICATE</b>					
This certifies that ( <i>Full name and address</i> ): <b>ANDREAS Guenter LUBITZ</b> [REDACTED] Germany					
Date of Birth	Height	Weight	Hair	Eyes	Sex
12/18/1987	68	150	BLOND	BLUE	M
has met the medical standards prescribed in part 67, Federal Aviation Regulations, for this class of Medical Certificate.					
Limitations	 <b>COPY</b>				
Date of Examination 06/18/2010	Examiner's Designation No. 00029				
Examiner Signature Typed Name WARREN S. SILBERMAN, DO					
AIRMAN'S SIGNATURE					
Applicant ID: 2001587238	Control No.: 200004752955				



AEROSPACE MEDICAL CERTIFICATION DIVISION, AAM - 300  
FAA Civil Aerospace Medical Institute  
Mike Monroney Aeronautical Center  
P.O Box 26080  
Oklahoma City, OK 73125-9914

ANDREAS Guenter LUBITZ

## Germany

Dear Airmen:

Above is your new medical certificate. It supersedes any previous one you may have been issued.

To validate this certificate, it is necessary that you sign it in the space provided (Airman's Signature).

This certificate must be in your possession at all times while exercising your pilot privileges.